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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/060,153	02/01/2002	Masanobu Takashima	Q67104	7577

7590 02/20/2004  
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EXAMINER

THORNTON, YVETTE C

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/060,153

Applicant(s)

TAKASHIMA ET AL.

Examiner

Yvette C. Thornton

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-4,6-8 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 3,4,7,8,12,14,16,18 and 20 is/are allowed.
- 6) ☒ Claim(s) 2,6,10,11,13,15,17 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This is written in reference to application number 10/060153 filed on February 1, 2002 and published as US 2002/0182530 A1 on December 5, 2002.

#### *Response to Amendment*

1. Claims 1, 5 and 9 have been cancelled. Claims 2-4, 6-8 and 10-20 are currently pending.
2. The amendment to the claims is sufficient to overcome the claim objections set forth in the previous office action.
3. The said amendment is also sufficient to overcome the rejections set forth under 35 USC 112.
4. The statement of common ownership to Fuji Photo Film is sufficient to eliminate the prior art reference of Nagata et al. (US 2002/0168494 A1) under 35 USC 102(e).

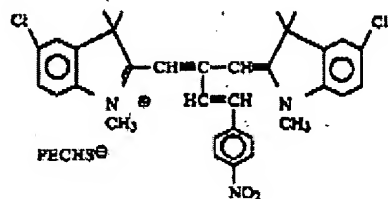
#### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalzell et al. (US 4307182 A) in view of Donald et al. (US 4168981 A) and Steiger et al. (US 4311786 A). Dalzell exemplifies in example 52 a radiation sensitive element comprising a substrate having coated on at least one side a radiation sensitive layer comprising a dye of

Art Unit: 1752



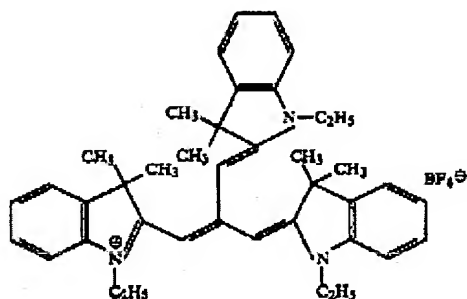
formula:  $\text{NO}_2$ ; a tetraaliphatic borate salt having the formula

BBu<sub>3</sub>C≡CH<sub>3</sub>; a trifluoroacetic acid fix and a PMMA binder (c. 17-18). The limitations of claimed formula (A) are met by the taught borate salt wherein Ra<sup>1-4</sup> are aliphatic groups (see c. 2, l. 16-59).

Dalzell fails to exemplify the use of a polymerizable compound having an ethylenically unsaturated bond. It is the examiner's position that it is well known and conventional in the art that compositions comprising a polymerizable monomeric compound and a radiation sensitive, free radical generating system have variable shelf life or stability. This position is supported by the background teachings of Donald which discloses that composition comprising a polymerizable monomeric compound and a radiation sensitive, free-radical generating system have variable shelf life or stability, especially at elevated temperature (c. 1, 1. 14-21). One of ordinary skill in the art would have been motivated by what is well known and conventional in the art to incorporate a polymerizable compound into the exemplified composition of Dalzell in order to improve stability, especially at elevated temperatures.

Dalzell also fails to teach and/or suggest a compound of general formula (2) as set forth in the instant claims. Steiger teaches the synthesis of novel halogenated trinuclear cyanine dyes and their use as sensitizers in photographic materials (c. 1, l. 1-44). Example 1 exemplifies the synthesis of a dye having the formula (5):

Art Unit: 1752



(c. 15, l. 25-68). The said dye has an absorption

maximum in methanol of 627 nm. Steiger teaches that the taught halogenated trinuclear tetramethinecyanine dyes of the taught invention are advantageous in the fact that they have little characteristic color; excellent photographic characteristics; high stability; and increased characteristic sensitivity (c. 14, l. 22-50). One of ordinary skill in the art would have been motivated by the teachings of Steiger to substitute the dye of example 52 of Dalzell with the dye of example 1 of Steiger, in order to incorporate the taught advantages of Steiger into the composition of Dalzell.

7. Claims 11, 13, 15, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalzell et al. (US 4307182 A) in view of Donald et al. (US 4168981 A) and Steiger et al. (US 4311786 A) as applied to claims 2, 6 and 10 above, and in further view of Harada et al. (US 4800148 A).

Dalzell, as discussed above, teaches that because the dye-borate systems of the taught invention are molecularly spectrally sensitive, a multiplicity of colored dyes may be used (e.g., cyan, magenta and yellow) in the same or different layers (c. 5, l. 2-5). Dalzell however fails to explicitly discuss the said colored dyes.

The background section of Harada teaches several methods of forming a colored image. One example comprises a light sensitive layer, which contains a silver salt, a reducing

Art Unit: 1752

agent, a polymerizable compound and a binder (c. 1, l. 40-58). Another example of color image forming substance is a leuco dye, which can develop to give a color in with an acid color developer (c. 2, l. 11-16). It is the examiner's position that the said silver salt and leuco dye meets the limitation of color-forming component A while the reducing agent and acid color developer meets the limitations of claimed color forming component B. Harada also teaches that light sensitive compositions can comprise polymerizable compounds formed by bonding a polymerizable group such as a vinyl group or a vinylidene group to a reducing agent or a color image forming substance. These compounds show functions as both the reducing agent and the polymerizable compound or the color image forming substance and the polymerizable compound (c. 14, l. 15-27). Harada further teaches that a color image can be formed on the light sensitive material by pressing the material after the development process when the leuco dyes and the polymerizable composition are contained in microcapsule and the acid color developer is arranged outside of the microcapsule (c. 23, l. 31-38). The image receiving layer of Harada can be composed of two or more layers according to the taught functions (c. 24, l. 20-24). It is the examiner's position that Harada serves to establish what is well known and conventional in the art.

One of ordinary skill in the art would have been motivated by what is well known and conventional in the art to (1) incorporate a silver salt/reducing agent combination or a leuco dye/developer combination into the composition of Dalzell to impart color; (2) incorporate a polymerizable compound modified with a reducing agent or a color forming substance into the composition of Dalzell in order to obtain one component which imparts both color and

stability (Donald US '981); and (3) to encapsulate the taught composition of Dalzell in order to form a composition which could form a color image by pressing.

The examiner notes that the prior art reference to Harada is commonly assigned to Fuji Photo Film, however, the statement of common ownership does not eliminate the said reference as prior art because Harada is cited under the statute of 35 USC 102(b).

*Allowable Subject Matter*

8. Claims 3-4, 7-8, 12, 14, 16, 18 and 20 are allowed.

9. The following is an examiner's statement of reasons for allowance: review of the prior art failed to teach and/or suggest a photopolymerization composition comprising a compound of claimed formula (4), (5) or (6) as set forth in instant claims 3-4 and 12. The examiner notes that the substitution of the on the said formulae (i.e., R13) is in a different position than that of claimed formula (2).

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Response to Arguments*

11. Applicant's arguments with respect to the instant claims have been considered but are of little moment in view of the new ground(s) of rejection.

12. As discussed above, the statement of common ownership to Fuji Photo Film is sufficient to eliminate the prior art reference of Nagata et al. (US 2002/0168494 A1) under 35 USC 102(e).

Art Unit: 1752

*Conclusion*

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

14. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvette C. Thornton whose telephone number is 571-272-1336. The examiner can normally be reached on Monday-Thursday 8-6:30.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Art Unit: 1752

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yvette Clarke Thornton  
Patent Examiner  
Art Unit 1752

yct